

Redescription of *Anthroherpon zariqueyoi* Jeannel, 1930 (Coleoptera: Cholevidae: Leptodirinae)

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Abstract. The hitherto unclear and rare leptodirine *Anthroherpon zariqueyoi* Jeannel, 1930 (Coleoptera: Cholevidae: Leptodirinae) is redescribed on the basis of recently collected specimens. It is morphologically compared with related *A. pozi* Absolon, 1913. *A. zariqueyoi* is an essentially endemic species of the Durmitor National Park (Montenegro).

INTRODUCTION

The cave-dwelling Leptodirinae species *Anthroherpon zariqueyoi* Jeannel, 1930 is rarely presented in public and private collections. It is a representative of the *pygmaeum*-group (sensu Guéorguiev 1990) within the phyletic lineage of *Anthroherpon* Reitter, 1889, with other genera *Leptomeson* Jeannel, 1924, *Parantrophilon* Noesske, 1914, *Remyella* Jeannel, 1931 and *Velebitodromus* Casale, Giachino et Jalžić, 2004 as currently defined Giachino & Vailati (2006). *A. zariqueyoi* was described according to a damaged single female holotype from the Nade pećina (= Cave 244, correctly Vodena pećina in the Vodeni do, Komarski kraj) (cf. Giachino & Lana, 2006), and allegedly preserved in the Zariquey's collection at the Museu de Ciències Naturals, Zoologia, Barcelona. Until years 70th of twentieth century remains of this female specimen were known only (Pretner, 1977).

Exactly, fifty years after its description a large-scale research programme on the fauna of Durmitor organized by the Montenegrin Academy of Sciences and Arts and the former Yugoslavian Entomological Society was implemented (see Pavicević et al., 1999). In 2003 for the last time further series of *A. zariqueyoi* was found by my colleagues in the Pećina u Zupcima (Sedleni do) in the Durmitor National Park.

The original Jeannel's description is not enough sufficient for the identification and thus, a brief redescription is necessary.

ACRONYMS AND EXPLANATIONS

The studied material is deposited in the following collections:

DCPC collection of Dávid Čeplík, Košice, Slovak Republic;

JBRC collection of Jože Broder, Kranj, Slovenia;

JLAC collection of Ján Lakota, Ružomberok, Slovak Republic;

PMGC collection of Pier Mauro Giachino, Settore Fitosanitario Regionale, Torino, Italy.
Explanations of morphological measurements and ratios:

TL total length (measured from the head anterior margin to the apex of the elytra);
AL/L antennal elongation index (antennal length/pronotum length plus elytral length ratio);

PW/L pronotum width/pronotum length ratio;

EW/L elytral width/elytral length ratio.

Locality labels are quoted in the original version. Comments on the exact label data are found in square brackets []. The term “antennal elongation index” is used here according to Casale et al. (2004) and Giachino & Vailati (2005). The nomenclature follow Giachino & Guéorguiev (1993) and Giachino et al. (1998).

RESULTS

Anthroherpon zariquieyi Jeannel, 1930

(Figs 1-4)

Anthroherpon (s. str.) *zariquieyi* Jeannel, 1930: 145.

Anthroherpon (*Anthroherpon*) *zariquieyi*: Laneyrie, 1967: 637; Pretner, 1968: 45.

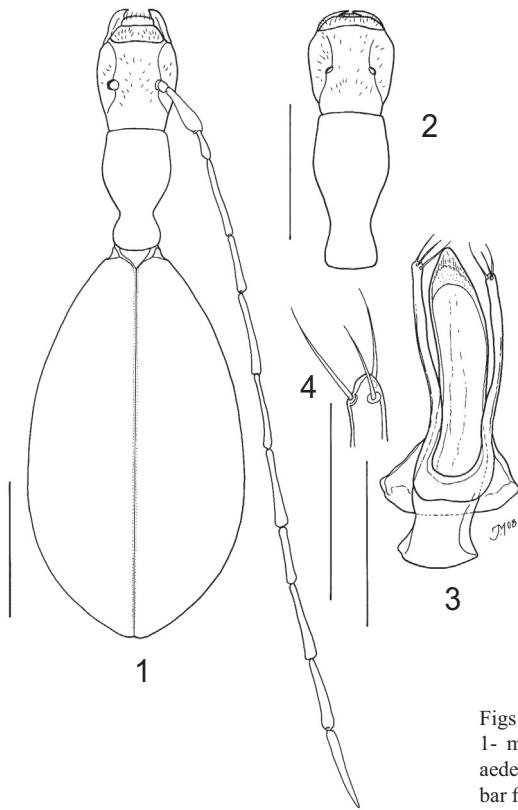
Anthroherpon *zariquieyi*: Perreau, 2000: 163; Perreau, 2004: 148.

Material examined. DURMITOR - YU, P.[ećina] ZUBCI - SEDLENA GREDA, 5.viii.1981, Leg. Broder, 1 ♂, 1 ♀, (JBRC); Montenegro, Durmitor, Pećina na Zupcima (cave), 2000 m, 19.vi.[19]98, Lakota lgt., 1 ♀, (JLAC); Montenegro, Durmitor, Pećina u Zupcima, Sedlenido, 20.vi.1998, R. Udržal lgt., 2 ♂♂, 1 ♀, (JLAC); Durmitor, Zupci, Pećina na Zupcima, 29.vi.2001, D. Čeplík leg., 1 ♂, (PMGC); Montenegro mountains, Pećina u Zupcima (GPS: N 43°05.586' E 19°03.147'), 29.vi.2001, D. Čeplík lgt., 4 ♂♂, 6 ♀♀, the same, 16.viii.2003, D. Čeplík lgt., 1 ♂, 1 ♀, (all DCPC).

Original description. “Long. 5 mm. Aspect de l’*A. Poži*, mais plus grand, les élytres plus renflés. Tête et pronotum d’aspect soyeux en raison du fort réseau alutacé qui couvre les téguments; élytres mats, finement granuleux et pubescents, comme chez l’*A. Poži*. Coloration foncée. Tête de même forme courte que chez *A. Poži*, mais tout le front et le clypéus sont parsemés de très gros points enfoncés. Antennes à articles apicaux proportionnellement plus allongés que chez *A. Poži*. Pronotum de même forme, mais sa partie antérieure moins globuleuse et moins convexe. Elytres plus renflés, leur région basale notamment plus large, la partie postérieure plus obtuse. Fémurs antérieurs très épais, même à l’apex, mais graduellement atténus, non brusquement comme chez *A. Poži*. Tibias antérieurs grêles et droits”.

Redescription. Body elongate, convex (Fig. 1). Head, antennae, pronotum, elytra and legs reddish testaceous, palpi flavous, elytral suture dark brown to brownish black. Pubescence whitish yellow. TL: 4.28-4.59 mm in males, 4.49-4.64 mm in females.

Head slightly wider than pronotum, with short, fine, relatively sparse pubescence. Antennae long, extending beyond the apex of elytron, AL/L: 1.44-1.58 in males, 1.25-1.28 in females. Microsculpture of head smooth and shining, puncturation on the frons equal in size to that on clypeus, deep and conspicuous.



Figs 1-4. *Anthroherpon zariqueyi* Jeannel, 1930:
1- male habitus; 2- female head and pronotum; 3- aedeagus; 4- apical portion of right paramere. Scale bar figs 1-2: 1 mm; fig. 3: 0.3 mm; fig. 4: 0.1 mm.

Pronotum cordiform, distinctly longer than wide, PW/L: 0.47-0.50 in males, 0.48-0.51 in females, widest in anterior third. Sides regularly rounded, hardly explanate, strongly sinuate near basal third, in females less sinuate at base (Fig. 2). Posterior angles obtuse, broad, moderately prominent. Base of pronotum subtruncate, not bordered, basal margin narrower than the anterior margin. Pronotal disc flatly convex, strongly shining. Microsculpture fine, consisting of isodiametric polygonal cells, punctures very small, sparse and shallow. Pubescence relatively short, scattered and semierect.

Elytra oblong oval, EW/L: 0.54-0.56 in males, 0.60-0.62 in females, widest behind their midlength, with obtuse tips. Lateral margins broadly arcuate, slightly converging proximad and more explanate posteriorly. Disc rather convex, moderately depressed along the sutural lines, abruptly descended in apical portion of elytra, its surface matt. Punctures deeply impressed, granular, somewhat larger and denser than those of pronotum; each elytron with short, relatively dense and erect pubescence.

Legs long and slender. Anterior femora thickened and gradually narrowed towards the apex. Protibia somewhat dorsoventrally curved, without apical comb of spines; meso- and metatibia straight.

Male genitalia (Figs 3-4). Aedeagus small, 0.57 mm long. Median lobe of aedeagus almost parallel-sided, gradually a little narrowed about its midlength, apically rounded. Parameres moderately emarginate in basal third, subrectilinear distally, not exceeding the aedeagic apex; furnished with 3 setae, one apical and two preapical, respectively. Inner sac without sclerotized structures.

Differential diagnosis. *Anthroherpon zariquieyi* can be distinguished from related species *A. pozi* Absolon, 1913 by its strongly impressed punctures on frons and clypeus, more extended apical antennomeres, somewhat narrowly explanate pronotal sides with obtuse posterior angles and flattened disc, convex surface of elytra and by the shape of anterior femora, gradually tapering distally. Most external characters, and especially the smaller body (length less than 5.5 mm), correspond to those of the *pygmaeum*-group.

Distribution. Known from the caves of the Durmitor National Park in Montenegro.

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REFERENCES

CASALE A., GIACHINO P. M. & JALŽIĆ B. 2004: Three new species and one new genus of ultraspecialized cave dwelling Leptodirinae from Croatia (Coleoptera, Cholevidae). *Natura Croatica* 13: 301-317.

GIACHINO P. M. & GUÉORGUIEV V. B. 1993: Note sul genere *Anthroherpon* Reitter (Coleoptera Cholevidae Leptodirinae). *Natura Bresciana, Annali del Museo Civico di Storia Naturale di Brescia* 28 (1992): 287-329.

GIACHINO P. M. & LANA E. 2006: *Leo Weirather (1887-1965). Diaries of a biospeleologist at the beginning of the XX century*. Le scienze 2, Edizioni Belvedere, 264 pp.

GIACHINO P. M., VAILATI D. & CASALE A. 1998: Major questions in the phylogeny and biogeography of Cholevidae (Coleoptera), with emphasis on the subfamily Leptodirinae, pp.: 179-209. In: GIACHINO P. M. & PECK S. B. (eds): *Phylogeny and Evolution of Subterranean and Endogeal Cholevidae (= Leiodidae, Cholevinae)*. Proceeding of a Symposium (30 August, 1996, Florence, Italy), XX International Congres of Entomology. Torino: Atti del Museo Regionale di Scienze Naturali, 295 pp.

GIACHINO P. M. & VAILATI D. 2005: Nuovi dati sul genere *Anthroherpon* Reitter, 1889 (Coleoptera, Cholevidae, Leptodirinae). *Bollettino del Museo Civico di Storia Naturale di Verona, Botanica Zoologia* 29: 149-163.

GIACHINO P. M. & VAILATI D. 2006: *Kircheria beroni*, a new genus and new species of subterranean hypogastriicolous Leptodirinae from Albania (Coleoptera, Cholevidae). *Subterranean Biology* 4: 103-116.

GUÉORGUIEV V. B. 1990: Recherches sur les Bathysciinae (Coleoptera: Catopidae) de Yougoslavie. I. *Anthroherponini*. *Acta Entomologica Musei Nationalis Pragae* 43: 237-273.

JEANNEL R. 1930: Revision des genres *Blattochaeta* et *Anthroherpon* (Bathysciinae). *L'Abeille* 34: 123-148.

LANEYRIE R. 1967: Nouvelle classification des Bathysciinae (Coléoptères, Catopidae). Tableau des sous-tribus, groupes de genres et genres. *Annales de Spéléologie* 22: 585-644.

PAVIČEVIĆ D., NONVEILLER G. & POPOVIĆ M. 1999: Diversity of troglobiotic coleopteran fauna of Durmitor Mountain (Insecta, Coleoptera). *Protection of Nature*, Belgrade 51: 103-110.

PERREAU M. 2000: Catalogue des Coléoptères Leiodidae Cholevinae et Platypsyllinae. *Mémoires de la Société Entomologique de France* 4: 1-460.

PERREAU M. 2004: Leiodidae, pp. 133-203. In: LÖBL I. & SMETANA A. (eds): *Catalogue of Palaearctic Coleoptera, Vol. 2: Hydrophiloidea - Histeroidea - Staphylinoidea*. Stenstrup: Apollo Books, 942 pp.

PRETNER E. 1968: *Catalogus Faunae Jugoslaviae. III/6. Coleoptera Fam. Catopidae Subfam. Bathysciinae*. Ljubljana: Academia Scientiarum et Artium Slovenica, 59 pp. (in Latin and Slovenian, English introduction)

PRETNER E. 1977: Pregled podzemne faune koleoptera Crne Gore. (Übersicht der unterirdischen Koleopterenfauna Montenegros). *Glasnik Odjeljenja prirodnih nauka, knjiga* 2. Crnogorska akademija nauka i umjetnost (Titograd): 91-186. (in Slovenian, German abstr. and summary)